

# **“Alcohol**

**and**

# **Health:**

**Public and Private.”**

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**AN ADDRESS**

**BY**

**PROF. G. SIMS WOODHEAD, M.D.**

**CAMBRIDGE,**

**AT THE 1903 CONFERENCE**

**OF THE**

**BRITISH TEMPERANCE LEAGUE.**

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# 'ALCOHOL AND HEALTH: PUBLIC AND PRIVATE.'

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[Address given at the Birmingham Conference of the British Temperance League, on Tuesday, June 16th, 1903, under the presidency of Mr. J. C. Clegg.]

Prof. WOODHEAD, who was received with prolonged applause, said: Mr. Chairman, ladies and gentlemen,—You, sir, said just now that we are old friends, and I must say that I am compelled to accept that statement. I do so all the more readily because, sir, I remember you a great many years ago in the Huddersfield athletic field, when you had a physique that enabled you to compete with the best in the country. (Applause.) You were then taking a part in athletics that practically put you at the top of the first class of athletes. I am sure you all will agree with me that our chairman has worn exceedingly well, and that whatever he may have done in the way, as some people say, of overtaxing his heart at the time, that heart has still remained in the right place, and he has continued to keep, I believe, on the right side of things. (Applause.) Moreover, he has carried on his work without what many people call to their aid, and what medical men in most cases are coming to accept as anything but an aid. It is from that point of view, sir, I wish to speak to-day. Although I have not had time to write out my paper, I have here a number of

## FACTS AND STATISTICS,

some of which I may inflict upon you bodily; others of which may be useful in unfolding our argument. From a medical point of view I am fully convinced that at no period of our lives are we the better for alcohol. (Applause.) I am not going to take up the much-vexed question of the use of alcohol as a drug, as that would stir up a very great discussion. I am thoroughly satisfied that at every period of our lives we are very much better without

alcohol ; and that alcohol, even in so-called moderate doses, has a distinct influence in shortening the lives of the individuals who take it. This alcohol question is one of the great questions of to-day. Many of you have, no doubt, read Messrs. Rowntree and Sherwell's work on the Temperance problem and its relation to our social questions, and you will have been struck, I am sure, as I have been, by the very moderate and almost restrained manner in which these writers have put forward the facts bearing on the Temperance question in relation to our physical well-being. Any of you who have not read this book, I should advise to read it as soon as you can, especially the first few chapters, because you will there find a most careful and temperate account of what alcohol is undoubtedly doing for us as a nation, and you will find it is doing nothing good—(applause)—that alcohol is sapping our very vitals, both as individuals and as a nation. (Renewed applause.) We Temperance workers are believers in prevention rather than cure. (Hear, hear.) We are like the doctors who at the present hold most firmly, that in dealing with disease, we must prevent it, rather than attempt to cure it. You cannot cure disease. You may put your patient in such a position that he may recover ; you may help in the process by giving him sleep, good food, &c., and by assisting him to get rid of waste products and disease products, but you cannot cure disease. Nature must do that. Nor can we cure intemperance, though we may do much to ameliorate some of its worst features. But it is our duty—my duty as a medical man, and your duty as good citizens—to do all we can to prevent the extension of intemperance. Primarily, to do this we must prevent the use of alcohol—I was going to say the indiscriminate use of alcohol, but I will say the use of alcohol. (Hear, hear.) If we begin to do that, we shall, I believe, improve our physical condition, not only as individuals, but as a nation. I should like to ask you to look at this question from the national standpoint. But before I do that I will give you one or two statements as to

#### ACCURATE EXPERIMENTS

that have been carried out quite recently. It has been found by eminent physiologists working abroad that if a man takes  $2\frac{4}{5}$  ounces of alcohol, at one dose say, and allows it to act for 24

hours, at the end of that time the individual has not recovered his normal mental activity. If that dose be continued for twelve days—that is,  $2\frac{4}{5}$  ozs. every 24 hours for that period, it will be found that the mental alertness of the man has suffered to the extent of from 25 to 40 per cent. That is, during the time this small quantity of alcohol has been taken, such changes have been caused in the central nervous system that its working power has actually been impaired to the extent of 25 to 40 per cent. I think you will agree with me that no man can afford to have his work interfered with to that extent. (Applause.) If our working power is impeded to that extent, there must be some great change in the central nervous system, the organ which has to do the work. Let me put alongside this experiment a statement made in Messrs. Rowntree & Sherwell's book that those people who are taking alcohol, are on an average, throughout the country, taking it in quantities of over  $2\frac{1}{4}$  ounces per day of absolute alcohol. That is, they are consuming within a fraction, the amount that is necessary to take to diminish our working capacity to the above extent. There you have an indication of the enormous waste that is going on in our mental output—fifteen out of every hundred, instead of let us say, from 25 to 40 per cent. Can we as individuals, or as a nation, afford to do without that 15 per cent. of mental activity? I maintain that we cannot, and I am sure you will agree with me. (Applause.) Let me go a step further. It has been calculated that in every family of five individuals in this country, about £22 is spent on alcohol. wastes £22 in each year. Now if £22 is taken to be one-fifth of the income of that family we are wasting in this country one-fifth of our working power; because I maintain that under present conditions the whole of that £22 is required for food. We need that food to build up the bodies of our boys and girls, and to make good the wear and tear that is going on in the men and women around us; we cannot do our our best work without it. Until we get that £22 we, as a nation, are

#### SUFFERING PHYSICALLY

very severely. I would that we could bring some of these facts home to the working people of this country—that the working man who is not deprived of his beer is robbing his poor wife and

children of the bread, meat, and milk they require for the building up of their constitutions—you must see at once what an enormous step we should have made in this as purely a medical question if the former deprivation could be submitted to. (Applause.) I want to assure you that all these figures given are of great import to a medical man. If we could only discontinue the use of alcohol, an enormous amount of disease might be prevented, and there would be a tremendous gain to the country! If we could prove this, I believe we could get many people to work with us who will not now look at our arguments. It is a question for us to take up. We cannot get legislation to take it up for us; but it is a question on which we must insist, in season and out of season. Until we get rid of this alcohol from our midst, we shall not attack our social, physical, or medical problems with the fullest possibilities of success. Scientific men who are working out this question are becoming total abstainers. Those who were in Germany this year would come across a number of men of this character—pathologists working out the problems of disease—who have become what we call “convinced abstainers.” They are not men who have been brought up among abstainers, and have imbibed their principles from them, but men who have tackled the question for themselves. They have seen the effect of alcohol, and say, after seeing these results “I am better without it.” (Applause.) It is for this reason that total abstinence is making such rapid strides on the Continent; the men who are preaching total abstinence are men who have convinced themselves, and are therefore in a position to teach others, that alcohol is not necessary to those leading the strenuous life, but is absolutely detrimental. What I have said applies to scientific investigation. I believe that it applies also in the case of those men who have charge of our legislation. I am convinced that there is now more hope of our getting legislation than there has ever been before, from the fact that so large a number of public men have taken up this question. When you get a man of influence in the political world to induce others to consider a question, you will arouse enthusiasm amongst political workers and voters, and you will find that men who commence a work because they were asked to do so, will continue the work because they believe in it.

(Applause.) There is nothing more striking in the present political movement than the great conviction that is being carried by men who are taking part in it because they themselves have become convinced. As we get politicians and scientific men on our side and convince them, they will soon convince other people, and create a strong public opinion in our favour. (Applause.) I wish now to make a few remarks about

#### ALCOHOL AND DISEASE,

and I am going to give, not my own authority, but that of a number of my colleagues. In an aphorism—an aphorism that, unfortunately, is too frequently forgotten in the medical world—Hippocrates says: "Experience is fallacious and judgment difficult." There is not a single question in medicine to-day of which this aphorism is more true than of this question of the use of alcohol. Experience is fallacious, because we approach the question with a biased mind; with all the weight of tradition hanging round our necks; and because we are so anxious to attribute to alcohol actions which we are gradually beginning to learn that it does not possess. Judgment is difficult, because it is difficult to obtain accurate data on which to form judgment. As the experimental method is being more widely and accurately used, we are gradually accumulating information which will correct our experience, and enable us to form a more accurate judgment. At a meeting of the Islington Medical Society, Dr. J. G. Glover (*Lancet*, 1903, June 13, p. 1671) raised some important points, of which I made a note. Dr. Glover informs us that Sir William Jenner said, "I have come to the conclusion that if a man has to work hard he must eat moderately and drink nothing." (Applause.) That from a man of Jenner's experience and accuracy is something we may accept without hesitation. This is not the statement of a teetotaler, but of a man who carefully observed his patients—who is trying to throw tradition aside, and to get rid of a good deal of bias which unfortunately comes in wherever alcohol is concerned. We have to rely a great deal on authority, and therefore we rely on *ex cathedra* statements of authorities; and so long as we have to do that, we must make allowance for individual experi-



ence and individual observation. At the same time, we must guard all experience by experiment, and in all cases bring our judgment to bear on every fact that we can collect. Let me give an example.. At one time that "experience" told the doctors, it was said, that it was necessary to give alcohol in certain cases of fever. They said, "Alcohol is necessary; you must give large quantities—first of all, because it is a substance readily assimilable; and secondly, because it is necessary to accelerate the heart." That "experience" is now proved to be fallacious. Sir William Gairdner, in a typhus fever epidemic in Glasgow, treated 189 cases, below 16 years of age, with only one death, a patient which came in practically moribund. These cases were treated without stimulants, except in the rarest cases. Dr. Glover states that under Dr. Todd's system there would have been from 30 to 35 deaths. Here we have experience corrected. It was an "experience," largely believed in, but it proved to be fallacious. People now began to ask: is it not fallacious as regards other points? It is; and it is gradually being proved that

#### ALCOHOL IS NOT NECESSARY

Dr. Glover also quotes Dr. Rolleston, one of the physicians of St. George's—a man of great ability who has given this question very careful attention, as a result of which he is gradually giving up the use of alcohol in cases of typhoid, and especially the use of alcohol in the large quantities recommended by some doctors. He points out that Dr. Graham Steel has indicated that cardiac dilatation is one of the most marked features of acute alcoholism. Unfortunately, during typhoid fever we have a state of affairs that is practically the same; and dilatation of the heart is brought about. It is a well-known fact amongst doctors that persons suffering from certain toxic fevers have a great tendency to dilatation of the heart. When large quantities of alcohol are taken dilatation of the heart ensues. In a disease in which there is a tendency to such dilatation does the exhibition of alcohol appear to be a very rational method of treatment? Some may say that it is homeopathic treatment, but is it one that even the most pronounced homeopathist would recommend? Dr. Rolleston says "I have come to distrust the administra-



tion of alcohol in typhoid fever, and especially in large quantities." The props are being gradually knocked away. (Applause.) Dr. Glover quotes another authority—the late Sir William Roberts—a remarkably careful man whom I knew exceedingly well, a man who made no statement he was not prepared to defend. One might not always agree with him, but one always had a respect for his opinions. "Sometimes" he said, "the indications of this natural tendency—that is to diminish the proportion of stimulants taken as age creeps on and the nutritive processes decline in elasticity and power—are neglected or resisted by the unwary." That is, as a man gets older he naturally takes less alcohol, even if he has been accustomed to take it during his adult life. But certain people resist this tendency, and these he speaks of as being amongst the "unwary." "They imagine," he continues, "that the quantity of stimulants which they took with impunity or even took with advantage during the vigour of manhood cannot hurt them in later life. This I believe is an error, the commission of which tends to accelerate senile decay, and to provoke fatally tending organic changes in the kidneys, liver, and arterial system." He was distinctly of opinion that alcohol used in later life in anything like the quantity used in adult life invariably

#### HELPED TO CAUSE EARLY OLD AGE

and premature death. That, I maintain, is a view we as medical men cannot afford to overlook. It is the duty of a doctor to keep his patient alive as long as possible. Unless he does this he is not doing his duty to the State, because every year of a man's life is of value to the nation, or ought to be. As individuals we are each of us worth so much to the State. If we are honest citizens we are contributing so much to the national welfare, and therefore if you can keep a man alive four years longer at the end of his life with his faculties clear, with all his experience at command, and with all his knowledge available, you are keeping that man alive at the most useful period of his life, and when he is most valuable to the nation. (Applause.) Therefore anything that induces premature senility and early death, is necessarily a very great loss to the individual and those who depend upon him, and consequently to the

nation. Alcohol is not the milk of old age, but its poison. It is also a poison at the earlier periods of life. (Applause.) It may not be possible to demonstrate the changes so readily; but everyone who has had anything to do with the examination of disease, and of patients who have succumbed to various diseases, recognises that the changes met with in young men—men of 40 or 45—who have taken to alcohol are changes that should not be met with before they have arrived at the age of 60, or in certain cases should not be met with until they arrive at the age of 70. Many men are old very early, because degenerative changes that should have taken place naturally at the end of their lives have been induced. It is all a question of degree. One man is as old at 70 as another man who has reached 90. Another man at 50 is as old as a man of 70 or 90. Senile changes are induced by overwork, by disease, by the accumulation of waste products, and by imperfect nutrition. Under these conditions the tissues have not an opportunity of living out

#### THEIR NORMAL LIFE;

they die of old age; and the individual possessed of those tissues also dies early. A man can live only as long as his weakest organ will allow him to live; and, if you overwork or poison any one organ—the liver, the brain, heart, or blood vessels—it becomes the weakest link in the chain, and as soon as that link goes the whole chain falls to pieces. (Applause.) Therefore, if you can prove that alcohol impairs the vitality of any organ or series of tissues so as to cause them to be prematurely old and to refuse to do their work at an earlier period than they would do, then you have proved that a man is shortening his life to the extent that he has aged that organ or set of tissues. You may say all this is a truism. It is true, of course, that if you grant my premises you will come to my conclusions; but I want to show that you will have to grant my premises. First of all, through the use of alcohol, a certain amount of our food is lost. We often hear of a "living wage;" and we know how difficult it is for many men to earn a living wage; and if the living wage be diminished by a fifth, how often must it fall below the living wage limit. If you do not give any organ or any body sufficient food,

you must bring about one of two things or both—imperfect development of that body during the time it should be growing; or when that body has grown as far as it will, you find that it degenerates if you work it too hard. You cannot obtain work from a body unless you give it plenty of food, without using up some of the substance of the body. The energy to do that work must come from somewhere; and if it does not come from the food it is coming from the tissues already built up. If you use up those tissues to do work they are not prepared to do by good nutrition, you start degenerative changes—the changes of old age—and they begin to go down the hill. (Hear, hear.) In growth we have the building up of tissues; in daily life we have the keeping up of these tissues to a constant level; in old age we have the going down hill of these tissues. If, during early or adult life, sufficient food is not supplied, the tissues are drawn upon, and they early begin to go down hill. There is another point: Alcohol

#### EXERTS A DEFINITE POISONOUS ACTION

upon the tissues. You will say “How do you prove that?” Well, we can see it in any drunken man in the street. There we see it in an advanced stage; but long before that man came to be a drunken man as ordinarily described, his tissues were poisoned. Kurz and Kraepelin have adduced evidence to show that two and four-fifths ounces of alcohol taken daily for 12 days interferes greatly with the mental output; but this poisoning of the tissues goes on in every case where alcohol is taken into the body. It may not become manifest at once and it may pass off very quickly. If you get rid of the waste products and get fresh material, the tissues will soon come back to their normal condition; but if you continue that gradual poisoning you will find that there comes a time at which the tissues cannot get back to their original healthy level, and the result is that they are prematurely old. They are working at a lower level and commence to go down the hill earlier. Further, alcohol interferes with the elimination of waste material. As this waste material is formed it poisons the tissues unless it is rapidly excreted. Here then you have a second poison brought in—alcohol plus waste material. In almost all the diseases we have to

deal with toxic substances, which act very similarly to alcohol, are formed in our bodies, which poison the tissues and interfere with the secretion of waste material; in some cases this poison acts so rapidly that you can actually see fatty degeneration going on in the heart muscles within the short period of three weeks or a month, the poison acting on the tissues and causing degeneration, and so long as it remains in the body it interferes with the return of those tissues to the normal. Once get the poison out of the system and the tissues begin to recover. If, however, alcohol is acting along with these disease poisons and interfering with the elimination of the waste products and the toxic substances formed in disease, they continue to act longer and more effectively, and cause greater waste and degeneration of the tissues. The result is in all cases of disease where alcohol is given continuously, the disease is accentuated and

#### A GREATER AMOUNT OF DAMAGE

is done than when the disease acts alone. Whether, then, we take a healthy body or a diseased body, alcohol interferes with the proper working of the tissues. It interferes with the nutrition of those tissues, and with the elimination of the waste and diseased products, and so with the return of the patient to health. There is something in alcohol which is constantly acting, not only directly, but also indirectly. It is prolonging our illness, shortening our lives, and interfering with a normally healthy individual in the carrying out of his work. I should like to draw attention to one or two points based on certain statistics. In a recent number of the *British Medical Temperance Review*, Dr. Hill, of Stoke-on-Trent, in an excellent article on some of the effects of alcohol, draws attention to certain facts that are of great interest to us, as abstainers. He points out that in the 33 years from 1866 to 1898 inclusive, the statistics of the United Kingdom Temperance and General Provident Institution show that the deaths in the General Section were about 97 per cent. of those expected. In the Temperance section there were only 70 per cent. of the expected claims; and he goes on to show that had all these people in these sections been abstainers there would have

been a gain of 4,713 lives in this one institution in one year only. Suppose we assume that these insurers had their lives increased by one year only, think of what that would have meant to the nation as a whole, and what these men could have done if they had been allowed this extra year of life with correspondingly increased mental and physical activity. You may say, taking these men alone, that there was a loss of about quarter of a million weeks' work. If we take the 60,000 who die annually from drunkenness as having lost one year of their lives, the number of weeks' work lost would total up to 3,120,000. From whatever standpoint we take the question,

#### THE LOSS TO THE NATION

must be something enormous. (Applause.) I should like now to say a few words about our loss in child life—(hear, hear)—because we are sometimes told that the alcohol question cannot be one which affects children much. If we do not take every means to prevent child mortality we are throwing away our national assets in a most wasteful fashion. The doctors are unanimous in agreeing that alcohol should never be given to children. We have already seen that it is impossible for a great many children to get the food they require to build up their bodies, and make them healthy men and women. If there is not a living wage, and if one-fifth of that wage goes in drink, it comes to this:—one-fifth of the money which should have gone in building up the bodies of the children is being wasted in drink. That is so much loss. But there is a greater loss. There are a great number of children whose physical energy is seriously interfered with by the fact that during the first years of their life they are not only not receiving sufficient milk, but are actually receiving tainted milk. They are receiving for the building up of delicate tissues materials which damage the tissues of adults. During the time they should be building up slowly, they are actually receiving milk, altered by the action of alcohol, which is causing their tissues to age before they have been properly formed. One imagines that he can always tell the shrunken, puny child in the street as a drunkard's child, and not the child of a sober mother, even when the latter is not so well nourished.

That tells, of course, on the physique of the child. It is puny; it cannot do work, it cannot run about, it cannot grow like the normal, healthy child. There is something more. The physical basis and the moral energy of that child are being interfered with, and that child is not going to be such a useful man when he grows up. Instead of being a man worth, say, £100 a year, with great intellectual power—the power of tackling

#### QUESTIONS THAT HAVE TO BE TACKLED

by every citizen, that child is going to be a person who is only worth £30 a year for a comparatively short time. It is going to be a child whose mental equipment is low, and whose physical equipment cannot make up for its mental deficiency. We have to remember it is not only the physique that is suffering but the mind. The contribution that individual can make to the national welfare is diminished through the fact that the physical basis, the brain, is not properly nourished to begin with. (Applause.) Then we have further a question which grieves us almost inexpressibly—a subject one scarcely likes to speak of; it is known that every Saturday night children lose their lives, not because their mother has not given them sufficient food, not because they are getting alcohol and disordered tissue products along with their milk; but simply because the mother is too drunk to look after them. Every medical man comes across cases where a child is overlaid. It is a common Saturday night occurrence. Every child who so loses its life is lost to the nation. Some people say “It is a mouth less to feed.” It is not a mouth less to feed had the conditions been better. It is a life lost to a prosperous country. In America it is held that a well-fed workman is a workman who does good work. It should be the same with us. The better we feed our people the more work we should get out of them. There is only one thing for us to do in this matter—I am afraid I have got a little away from the strictly medical aspect of the question—and that is, we must make up our minds to

#### EDUCATE THE PEOPLE.

We have to educate our fellows; we must take this matter in hand and make ourselves responsible for it. It is a big responsibility, but it is one worth assuming—the making of ourselves



responsible for the education of the people as to what alcohol is and does. I had the pleasure only a few minutes since of speaking to a lady who has determined, and I believe very wisely determined, to see if something cannot be done in connection with the education of our children in the principles that should guide us in the use or non-use of alcohol. (Applause.) Perhaps she may not succeed all at once ; it may take some time ; but if people will accept that responsibility, if they will say, "Now we believe we have got a good thing ; we do not want to keep it to ourselves ; we want other people to have the advantage of it ;" then I believe much can be done, and done quickly. A great deal has been done. Legislation has been carried in the House of Commons that 70 years ago would have been absolutely impossible. People who are abstainers now, 20 years ago would have laughed at us as "fanatics," "faddists," and "cranks." People are gradually coming to see that there is more in this question of intemperance than at first meets the eye. (Applause.) If I have any criticisms to make on Messrs. Rowntree and Sherwell's book, it is that their statements are far too moderate. It is an excellent fault, but I believe that in what they have put down, they have far understated most of the Temperance aspects of the social problems with which they deal ; and for this reason ;—they do not take into full enough consideration the indirect effect of alcohol ; and it is only as we come to study these indirect effects on the physique of the nation, on the building up of the bodies of our men and women, that we realise

#### THE IMPORTANCE OF THE ALCOHOL QUESTION.

I might now go on to give you a description of some of the tissue changes that take place in disease. I might go on to tell you that a consumptive patient is greatly injured, both directly and indirectly, by the exhibition of alcohol. I might go on to tell you that many infectious diseases are much worse borne by people who take alcohol than by people who do without it. I might go on to say that, from experiments, it has been proved that people are even more liable to catch infectious diseases than are those who do not take it. these things can be proved—they have been proved by actual experiments—and



it is unnecessary to go into them here. If it is capable of proof on a lower animal body, are we not very foolish if we do not accept it as true for ourselves? If the poisonous substances produced in disease act more readily in the presence of alcohol in the lower animal, should we not expect them to act in a similar fashion in our own case? We know it does so act. There is nothing more striking in the work of the last ten years than what has been proved in connection with the action of alcohol on diseased tissues, on the brain cells, on the co-ordination of movements, and the action of the muscles, and in the production of the degenerative changes that take place in the various organs of the body. All these things are being driven home gradually; and as they are driven home, it is recognised that alcohol is something that is acting, both directly and indirectly, in the production of disease. In all cases where given, it has a markedly deleterious action. Although the patient may in certain cases receive some slight temporary benefit, and withstand this action for years, there comes a period at which the deleterious action makes itself manifest; the patient inevitably suffers in the long run. Let us once and for all get into our minds that alcohol is a poison, acting somewhat similarly to certain of the poisons of disease; we shall then come to look upon it as something to be avoided. Moreover, let us remember that it has a direct action on the tissues; that it causes old age to come on early; that it hinders a man from doing his best work, lays him more open to the attacks of any disease that is going, and also renders his chance of recovery from any disease by which he is attacked much less than if he took no alcohol at all. (Applause.) Mr. President, I find that I have outstepped my time limit. I must now leave the question; but I ask you to study this question from the point of view of the action of alcohol on the tissues; of the waste of life that goes on in every town in the kingdom; from the point of view that it interferes with our food supply; and lastly, from the point of view of the action of this toxic substance on tissues already hampered by the action of waste products and the poisons formed during the course of disease of various kinds. On every count, the verdict must be against the use of alcohol. (Loud applause.)